

ABSTRACT

A method and apparatus for point cloud assembly are described. In one embodiment, the method includes the obtaining of a data set of a first point cloud and a data set of a second point cloud. Once obtained, a portion of geometry defined by each respective data set is identified, which substantially describes a similar geometric shape. Next, a transformation is computed, such that the portion of geometry in each data set aligns to substantially minimize alignment error. Finally, the computed transformation is applied to the first point cloud to register the first point cloud relative to the second point cloud. In one embodiment, identification of the geometric portion describing a substantially similar geometric shape may be performed utilizing geometric reference point information, image texture information or a combination thereof.